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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/562,045

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Colin Ledsome

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EXAMINER

PANG, ROGER L

ART UNIT

PAPER NUMBER

3655

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/562,045	<b>Applicant(s)</b> LED SOME, COLIN	
	<b>Examiner</b> Roger L. Pang	<b>Art Unit</b> 3655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,8-11 and 13-15 is/are pending in the application.
- 4a) Of the above claim(s) 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,6,10,11 and 13 is/are rejected.
- 7) ☒ Claim(s) 4,5,8,9 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6-3-09</u> .  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

The following action is in response to the amendment filed for application 10/562,045 on June 3, 2009.

Upon further consideration, it has been concluded that the cited art does read upon a limitation previously noted as allowable (see below). Therefore, the present action is a new non-final rejection. The office apologizes for any inconvenience.

#### ***Election/Restrictions***

Claim 14 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on November 10, 2008.

#### ***Claim Objections***

Claims 1, 6, 10-11 and 13 are objected to because of the following informalities:

In Claim 1:

on line 6, “toration” should be replaced with --rotation--.

on line 9, “a control force” should be replaced with --said control force--.

In Claim 6:

on line 2, “a control force” should be replaced with --said control force--.

on line 3, “a control force” should be replaced with --said control force--.

on line 6, “a control force” should be replaced with --said control force--.

In Claim 10:

on line 4, “a control force” should be replaced with --said control force--.

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In Claim 11:

on line 9, “a control force” should be replaced with --said control force--.

In Claim 13:

on line 5, “a control force” should be replaced with --said control force--.

on line 7, “a control force” should be replaced with --said control force--.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 6 and 10-11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Kidd ‘112. With regard to claim 1, Kidd teaches a drive system, comprising: an output shaft 79, which is rotatable about a rotation axis 12, and from which an output is in use; and at least one gyroscopic rotor unit comprising a gyroscopic rotor 42, which is operably coupled to the output shaft and, on applying a control force to the gyroscopic rotor in a plane including the rotation axis of the output shaft, effects precessional rotation of the at least one gyroscopic rotor unit about the rotation axis of the output shaft to drive the output shaft; and a control mechanism 26/32/84/82, which is operable to apply said control force to the gyroscopic rotor of the at least one gyroscopic rotor unit, and thereby control the output at the output shaft. With regard to claim 3, Kidd teaches the system, wherein the at least one gyroscopic rotor unit further

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comprises a CV coupling 40, which couples the gyroscopic rotor thereof to the output shaft such as to enable rotation of the gyroscopic rotor on applying a control force thereto in the plane including the rotation axis of the output shaft and effect rotation of the output shaft with precessional rotation of the at least one gyroscopic rotor unit about the rotation axis of the output shaft. With regard to claim 6, Kidd teaches the system, wherein the gyroscopic rotor is configured such as to provide for application of a control force in one of two opposite senses, whereby the application of a control force in one sense effects precessional rotation of the at least one gyroscopic rotor unit about the rotation axis of the output shaft in one sense, thereby driving the output shaft in the one sense, and the application of a control force in the other sense effects precessional rotation of the at least one gyroscopic rotor unit about the rotation axis of the output shaft in the other sense, thereby driving the output shaft in the other sense (Cols. 5-6). With regard to claim 10, Kidd teaches the system, comprising: first and second gyroscopic rotor units 42 disposed in opposed relation about the output shaft, each comprising a gyroscopic rotor, wherein the gyroscopic rotors are rotated in opposite senses and, on application of a control force to each of the gyroscopic rotors in a plane including the rotation axis of the output shaft, effect precessional rotation of the respective gyroscopic rotor units about the rotation axis of the output shaft (Cols. 5-6). With regard to claim 11, Kidd teaches a method of driving an output shaft, the method comprising the steps of: providing a drive system including an output shaft 79, which is rotatable about a rotation axis, and at least one gyroscopic rotor unit 42 comprising a gyroscopic rotor, which is operably coupled to the output shaft and, on applying a control force to the gyroscopic rotor including the rotation axis of the output shaft, effects precessional rotation of the at least one gyroscopic rotor unit about the rotation axis of the output shaft to drive the output

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shaft; and applying said control force (via 26/32/84/82) to the gyroscopic rotor of the at least one gyroscopic rotor unit to effect precessional rotation of the at least one gyroscopic rotor unit and control the output at the output shaft. With regard to claim 13, Kidd teaches the method, wherein: the drive system comprises first and second gyroscopic units disposed in opposed relation about the output shaft, each comprising a gyroscopic rotor 42/54, and the gyroscopic rotors being rotated in opposite senses; and the step of applying said control force to the gyroscopic rotor comprises the step of: applying said control force to the gyroscopic rotors (via 26/32/84/82) of the gyroscopic rotor units to effect precessional rotation of the gyroscopic rotor units and control the output at the output shaft.

***Allowable Subject Matter***

Claims 4-5, 8-9 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**FACSIMILE TRANSMISSION**

Submission of your response by facsimile transmission is encouraged. The central facsimile number is (571) 273-8300. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see MPEP 502.01. In general,

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most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check.

Responses submitted by facsimile transmission should include a Certificate of Transmission (MPEP 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office (Fax No. (571) 273-8300) on \_\_\_\_\_ (Date)

Typed or printed name of person signing this certificate:

\_\_\_\_\_  
\_\_\_\_\_

(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the

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processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roger L. Pang whose telephone number is 571-272-7096. The examiner can normally be reached on 5:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roger L Pang/  
Primary Examiner, Art Unit 3655

Roger L Pang  
Primary Examiner  
Art Unit 3655

July 16, 2009